

CLAIMS

I claim:

1. A method for accessing hardware I/O control  
5 blocks, which are stored in an hardware I/O control  
block array, by a parallel SCSI host adapter, said  
method comprising:

addressing one page in a plurality of pages  
of said hardware I/O control block array for said  
10 parallel SCSI host adapter using a first portion  
of a hardware I/O control block array pointer in  
said parallel SCSI host adapter wherein said one  
page includes a plurality of storage sites for  
hardware I/O control blocks; and

15 addressing a hardware I/O control block  
stored in said one page using a second portion of  
said hardware I/O control block array pointer in  
said parallel SCSI host adapter.

20 2. The method of Claim 1 wherein said addressing  
a hardware I/O control block stored in said one page  
further comprises:

using a tag supplied by a reconnecting SCSI  
target as said second portion.

25 3. The method of Claim 1 further comprising:  
storing a reconnecting target address by said  
parallel SCSI host adapter.

30 4. The method of Claim 3 further comprising:  
comparing a target address stored in said  
hardware I/O control block with said reconnecting  
target address.

35 5. The method of Claim 4 further comprising:

using said hardware I/O control block upon said target address and said reconnecting target address being equal.

5           6. The method of Claim 4 further comprising:  
            changing said first portion of said hardware  
I/O control block array pointer upon said target  
address and said reconnecting target address being  
unequal.

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7. The method of Claim 6 further comprising:  
    addressing another page in said plurality of  
pages of said hardware I/O control block array for  
said parallel SCSI host adapter using said first  
15       portion of said hardware I/O control block array  
pointer in said parallel SCSI host adapter wherein  
said another page includes a plurality of storage  
sites for hardware I/O control blocks.

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20       8. The method of Claim 7 further comprising:  
    addressing a hardware I/O control block  
stored in said another page using said second  
portion of said hardware I/O control block array  
pointer in said parallel SCSI host adapter.

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9. The method of Claim 8 further comprising:  
    comparing a target address stored in said  
hardware I/O control block stored in said another  
page with said reconnecting target address.

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10. The method of Claim 9 further comprising:  
    using said hardware I/O control block stored  
in said another page upon said target address  
stored in said hardware I/O control block stored  
35       in said another page and said reconnecting target  
address being equal.

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11. A method for accessing hardware I/O control blocks, which are stored in a hardware I/O control block array, by a parallel SCSI host adapter, said

5 method comprising:

storing hardware I/O control blocks for targets on a SCSI bus in a paged hardware I/O control block array; and

10 accessing one hardware I/O control block in said paged hardware I/O control block array addressed by a hardware I/O control block array pointer, wherein said hardware I/O control block array pointer includes a page identifier and a storage site identifier.

15 12. The method of Claim 11 wherein a first portion of said paged hardware I/O control block array pointer includes a page identifier, and said method further comprises:

20 configuring said page identifier to identify a page in said paged hardware I/O control block array so that said paged hardware I/O control block array pointer addresses one hardware I/O control block page in said array.

25 13. The method of Claim 12 further comprising:

loading a tag from a reconnecting target into said storage site identifier of said paged hardware I/O control block array pointer.

30 14. The method of Claim 13 further comprising:

comparing a target address stored in said one hardware I/O control block with an address of said reconnecting target.

35 15. The method of Claim 14 further comprising:

using said hardware I/O control block upon said target address and said address of said reconnecting target being equal.

- 5           16. A system comprising:  
            a parallel SCSI host adapter comprising;  
                a sequencer; and  
                a paged hardware I/O control block array  
            pointer coupled to said sequencer; and  
10           a memory coupled to said paged hardware I/O.  
            control block array pointer, and including a paged  
            hardware I/O control block array comprising:  
                a plurality of pages going from a lowest  
                page to a highest page, wherein each of said  
15           plurality of pages further comprises:  
                    a plurality of hardware I/O control  
                    block storage sites, wherein a number of  
                    said hardware I/O control block storage  
                    sites in said plurality of hardware I/O  
20           control block storage sites on at least  
            one of said plurality of pages is equal  
            to a number of unique tag values that  
            can be returned by a tagged queue SCSI  
            target reconnecting to said parallel  
25           SCSI host adapter.

17. The system of Claim 16 wherein said memory is external to said parallel SCSI host adapter.

- 30           18. The system of Claim 16 wherein said memory is internal to said parallel SCSI host adapter.

19. A memory comprising:  
                an expanded SCSI control block array for a  
35           parallel SCSI host adapter, said expanded SCSI  
            control block array comprising:

a plurality of pages going from a lowest page to a highest page, wherein each page further comprises:

5 a plurality of SCSI control block storage sites,

10 wherein a number of SCSI control block storage sites in said plurality of SCSI control block storage sites on at least one of said plurality of pages is equal to a number of unique tag values that can be returned by a tagged queue SCSI target reconnecting to said parallel SCSI host adapter.

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